VALUE OF SEA MUSSELS FOR FOOD.

Result of Investigations Made by Bureau of Fisheries.

The character and food value of sea have eaten mussels prepared in vanussels, which have been little utiled up to the present time, are set orth in an extract from a bulletin of ne bureau of fisheries by Irving A. ield of the United States fisheries aboratory, Woods Hole.

The basis of Mr. Field's report is a eries of investigations carried on uring three summers for the United states bureau of fisheries, at Wood's The food of the mussel was ound to consist of microscopic plants nd animals. Their enemies are nunerus. Killfish, cunners and scup are ery fond of the young mussels, reedily stripping them from the wharf piles, seaweeds and other obects of attachment. The squeteague and the tautog eat them from the mollusters are the mollusters. neds and among the mollusks he drill (urosalpinx cinereus) des-roys large numbers by boring a hole through the shell to the soft parts on which it feeds.

The sea mussel has very wide dis-tribution, occupying most of the coast line of the North American country. It is circumpolar in range, and extends down the eastern littoral to North Carolina down the Pacific coast to San Francisco, along the Asiatic water front to Japan, and follows the European shores southward to the Mediterranean sea. It is ex-tremely abundant in the shallow, sheltered bays along the coastal lands sheltered bays stong that of New Jersey, Long Island, Rhode leland and Massachusetts. Mussels seem to thrive equally well in shal-

low and deep water.

The report directs attention to the fact that while the sea mussel is practically unknown as an article of food in the United States, it has been utilized in other parts of the world for hundreds of years. According to the one time French scientist, Quatrefages, who, half a century or more age, made extensive scientific coastwise voyages in the Atlantic and Mediterranean, the artificial culture of mussels for food began as early as the year 1035. The mussel is extensively used as a food in England, France, Norway and Russia.

Tests Made Show That Fish Are Very Palatable.

Tests have been conducted in the Marine Biological laboratory mess hall it Wood's Hole, in which these shellcovered denizens of the brine were orepared for food in several different ways. From the standpoint of palatability, Mr. Field has abundant testinony from scores of persons who

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Pensacola Fish Notes.

During the week end March 25, nine smacks arrived at Pensacola, carrying fish. One other made port, with only a broken mast. She was the Frances Louise, to E. E. Saunders & Co.

In all the arrivals last brought 117,000 pounds of fish, of which the red snapper catch reached 105,000 pounds, while the balance, 12,-

000, were groupers.

The season for Spanish mackerel opened up last week. Fishermen report large quantities of the fish outside. The mackerel now being caught of unusually good quality and are bringing 4 cents per pound. According to reports from the East Bay section, mackerel are more plentiful this season than during previous years and indications point to a very successful season.

Smack receipts for the week were: Warren Fish Co., smack Ariola, 3000 pounds red snapper; smack Osceola, 19,000 pounds do.; smack Chicopee, 13, 000 pounds do; smack Franklin, 10,000 pounds do and 5000 lbs. groupers; smack Halcyon, 4000 pounds red snappers; smack Mineola, 18,000 pounds do. E. E. Saunders & Co., smack Carrie B. Welles, 9000 pounds red snap-

per and 7000 pounds groupers; smack Wallace McDonald, 3000 pounds red snapper; smack Albert Geiger, 26,000

rious ways—pickled, steamed, roasted, stewed and fried—that in flavor and texture they are superior to the long clam and fully equal to the oyster. A few, he says, were not inclined to rank them so high. Nearly four years ago mussels were used by scores of people in Wood's Hole. They were tried pickled, and cooked in as many different ways as is the oyster, and enthusiastic comments were made as to the appetizing appearance of the cooked mussel, its rich flavor and the delicate texture of its flesh.

Personal testimony was received fa-voring mussels for their digestibility. Persons with weak stomachs said they could eat them without sufferthey could eat them without suffer-ing any inconvenience, and others as-sured Mr. Fields that they would not beckon in the nightmare if eaten be-fore going to bed. Careful scientific experiments with mussels, eggs and beef, showed that there was no very great difference in the digestibility of eggs and mussels. Beef was considrably more digestible than either.

"It must, however, be pointed out," says the report, "that beef has more nitrogenous extractives than egg, and that the greater digestibility of the beef may be accounted for, in part, by the fact that under the conditions of these experiments the nitrogenous extractives are calculated as protein. How much nonprotein nitrogenous extractives mussels contain is not known: It must be noted, however, that, judged by sight, the greater part of the mussels went into solu-tion. The undissolved portions consisted mainly of the tough parts, such as the foot, and poster; or adductor muscles."

As a food material, from the stand-point of chemical composition, and nutritive value, the mussel is determined to be superior to the oyster; is equal to the long clam, and has about one-third the value of lean beef. It is widely distributed, extremely abundant, and easily obtained. Mussels abound in the bays and estuaries. They grow in great beds, often acres in extent, on the surface of mud or sand, extending out from be-tween tidemarks to several fathoms

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Herring Struck in on Maine Coast. Herring have struck the Maine coast, for all the time is so early. Best of all, the herring are reported Best of all, the herring are reported in large quantities. According to Capt. George W. Greenleaf of the United States fisheries steamer Gannet, no end of them have been found in the Sheepscot river. Those that are being caught are five and six inches long. The traps are reported to be full of fish, too small, even, to be used as sardines. Owners of the traps have taken the twine away in the hope that the herring would run the hope that the herring would run out, but the small fish refuse to do so and swim around in the traps. It will be only a short time before they

will be large enough to be caught.

The first of April is regarded as unusually early for the taking of herring. Last year was very late and a very poor year. This one promises to be the best for many years. herring already found in the Sheep-scot are excellent for bait, so that there will be no scarcity of this much needed article during the summer and

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Salmon Market Exceptionally Strong. At no time in the history of the salmon industry have conditions, as to values and available supply of the canned product been in such strong shape as now. The markets of this country have drawn upon salmon factors in London and Liverpool for stock piece out our wants for actual consumption. Every salmon canner on the Pacific coast is sold up to capaci-ty on futures of 1911 pack. Never in

the trade records have futures been

booked so far ahead.

FOUR TOWED

SCH. GRAYLING ARRIVED THIS NOON FROM GEORGES HAND-LINING TRIP.

Yesterday afternoon four towhouts towed down four vessels to this port, three of them Gloucester craft. The tug Leader had the Mary E. Cooney, tug Mary Arnold had sch. Eugenia, tug H. A. Mathis towed down sch, Jeanette and tug Sadie brought down sch. Mooween.

The Mooween had 10,000 salt cod on board after landing her halibut fare at T wharf.

There were no arrivals during the night and this forenoon produced nothing up to just before noon, when sch. Grayling arrived from a Georges handlining trip with a fare of 6000 pounds of salt cod and 1000 pounds of

Today's Arrivals and Receipts. The arrivals and receipts in detail

Sch. Mooween, via Boston, 10,000 lbs.

Sch. Mary E. Cooney, via Boston. Sch. Jeanette, via Boston.

Sch. Eugenia, via Boston.

Sch. Annie and Jennie, shore.
Sch. Flora J. Sears, shore.
Sch. Edith Silveira, shore.

Sch. Walter P. Goulart, shore.

Sch. A. C. Newhall, shore. Sch. Grayling, Brown's Bank, 6000 lbs. salt cod, 1000 lbs. halibut.

Vessels Sailed.

Sch. Ralph L. Hall, south mackerel eining.

Sch. Feperanto, haddocking. Sch. Effie M. Prior, haddocking.
Sch. Mary B. Greer, haddocking.

TODAY'S FISH MARKET.

Salt Fish.

Handline Georges codfish, large, \$5; medium, \$4.50; snappers, \$3. Trawl, Georges codfish, large, \$4.75; medium, \$4.25.

Eastern halibut codfish, large, \$4.50;

medium, \$4. Haddock, \$2.

Pollock, \$2.

Cusk, large, \$2.50; medium, \$2; snappers, \$1.50. FE ANTINETA

Hake, \$1.75.

All codfish with napes picked bring 25c over the above prices.

Fresh Fish.

Haddock, \$1.10.

Large cod, \$2.25; mediums, \$1.75; nappers, 75c. Cusk, large, \$1.60; mediums, \$1.25;

snappers, 60c.

Dressed pollock, \$1.10; round, \$1. Fresh codfish not gilled bring 10c per cwt, less than the above prices. Halibut, 10 1-2 cts. per lb. for white and 8 1-2 cts. for gray.

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NOVA SCOTIA SHIP YARDS BUSY.

Many Have Fishing Vessel Orders Ahead to Last a Year.

Fishermen and captains who have arrived here recently from Scotia, report that the shipyards are worked to their full capacity and launchings of fishing vessels have been a most common occurrence since last fall.

More than that, they say that the vessel builders have orders enough ahead to keep them busy for a year on fishing vessels those who want to start crafts are told that they will have to wait, as there are lots of orders ahead.

As one of the men said, who came here Sunday, "They have gone crazy over reciprocity and expect to get rich in a year if it passes, and all of them are confident that it will soon be a law."

april 6.

Expect Drop in Lobster Prices.

Boston dealers smile at the report that the price of lobsters will soon reach \$1 per pound. Dealers say they do not believe lobsters are going higher than 40 cents, and expect a drop when better weather permits fishermen to get busy. Receipts of lobsters from the Provinces at present are about one-fifth normal owing to stormy con-

Fishing Facts and Fancies.

William Perry, trawlmaster, of North Shields, Scotland, was fined £25 in an Aberdeen court the other day for illegal trawling in the Moray Firth, five miles from Helman Head, near Wick. It came out in the evi-dence that three foreign trawlers were fishing in the same part of the Firth, but the fishery cruiser, in view of the present state of the law, could not interfere.

China and Japan are pre-eminently the seaweed eating nations. Among no other people are seaweeds so extensively eaten and relished as food

substances.

Albermarle sound is the greatest shad fishing water in this country, and that, of course, means the world. From its main body and its tributary rivers more than 2,000,000 shad are taken every spring before the northern fisheries have as yet hauled a seine. Besides seines three miles long, put out by means of steam launches and hauled in by steam stationary engines, hundreds of gill, pound and skim nets are in constant service taking the shad from the wa-

In a report by the British Consul it is stated that a French sardine factory started in Morocco a year or two ago continues its operations, though the turn-out was apparently smaller than before. There are also schemes on foot for establishing tunny fisheries on the northwest coast, which should make a good return. Fish of various kinds are plentiful all along the coast, especially in the south, where French trawlers occasionally work, and lobsters and craw fish abound. The fisheries are for the most part in the hands of Spaniards and Portuguese.

The Norwegian catch to recent date is given as 8,000,000 bacalao and 3 500,000 stockfish, against 13,300,000 bacalao and 5,200,000 stockfish at the corresponding time last year.

The value of the salt mackerel imported into the United States in February last was \$73,976, against \$10,-129 in the corresponding month a year ago. The value of the cod, haddock, hake and pollock was \$140,728, against \$98,374.

Benevolence is the name of a fishing schooner recently launched at Liverpool, N. S., for Capt. Leo Cork-

Latest advices from the leading centers of consumption abroad confirm the impression that the slackness in the general demand has resulted on account of the high prices prevailing in the staples of the trades.—New York Fishing Gazette.

April 7.

Newfoundland Bank Fishermen.

Recent reports brought along to St. John's, N. F., by the steamer Prospero says that for the past 10 days very little fishing is being done amongst the bankers at LaPoile, Burgeo and Channel. A peculiar circumstance is that, fish is extremely plentiful but operations are hampered considerably by incessant adverse weather conditions. Most of the vessels are frozen in while others are storm-bound and for these reasons cannot get to fishing grounds. As soon as the weather permits operations will be carried on and good fishing is anticipated. To date sch. Gertrude, of For-tune, Capt. Walter Kennedy, has 100 quintals on board for two sets.

Seal Hunters Drowned.

Six Magdalen Islands fishermen are believed to have lost their lives while hunting seals last Saturday, according to advices received at Halifax yesterday. On Saturday six fishermen headed by a man named Labello lef. West Cape to hunt seals on the ice floes in the Gulf of St .Lawrence.

It is reported that the men were

seen late Saturday in the ice near one of the bays making desperate efforts to reach shore. A heavy northerly gale was raging at the time and it is feared that all of them have perished.

April 7

Alewives at Edgartown.

The Times Edgartown correspondent advises that alewives are being taken there every day that it is warm. On Wednesday 10,000 were hauled. At present the fish taken are being shipped to Boston and New Bedford.

Halibut Took Upward Jump.

Halibut took a nice upward jump this morning when the fare of sch. Selma sold to the American Halibut Company at 12 cents per pound for white and 10 cents for gray, an advance of 1 1-2 cents per pound on each, over last sales.

SCH SELMA BRINGS HALIBUT FARE FROM ST. PETER'S BANK.

Sch, Selma, from a halibut trip, arrived during the night. The craft is from St. Peter's bank and halls for 16,000 pounds.

Sch. W. H. Moody is in from a Georges handling trip with 18,000 pounds of salt cod and 1500 pounds or halibut.

Yesterday sch. Eugenia, which came down from Boston, brought 16,000 pounds of salt cod which went to split, About all the market and shore boats

and the pollock seiners are out today. This forenoon sch. Arthur D. Story arrived, from Georges handlining, with a fine fare, 35,000 lbs. salt cod and 1500 lbs. of halibut and sch. Mary DeCosta brought down 35,000 lbs. of fresh cod from Boston for the splitters.

The Italian power dory fishermen and the other small craft had a good day yesterday, and before night had landed about 25,000 pounds of fresh fish, mostly haddock, to the dealers at the Fort.

Today's Arrivals and Receipts.

The arrivals and receipts in detail are:

Sch. Selma, St. Peter's bank, 16,000 lbs. halibut, 3000 lbs. salt cod.

Sch. W. H. Moody Georges, 18,000 lbs. salt cod, 1500 lbs. hallbut. Sch. Eugenia, via Boston, (Thursday), 16,000 lbs. fresh fish.

Sch. Joseph H. Cromwell, shore. Sch. Mary DeCosta, via Boston, 30,-000 lbs. fresh fish.

Steamer Nomad, shore, 4000 lbs. fresh fish. Steamer Mindora, via Boston, 7000

lbs. fresh fish. Steamer Quoddy, shore, 6000 lbs.

fresh fish. Prince Olaf, shore, 4000 Steamer

lbs. fresh fish. Steamer Weazel, shore, 4000 lbs.

fresh fish. Steamer Eagle, shore, 3500 lbs. fresh fish.

Sch. Maud F. Silva, via Boston.

Sch. Manhasset, via Boston. Sch. Teazer, Quero Bank, 20,000 lbs.

halibut. Sch. Arthur D. Story, Georges, handlining, 35,000 lbs. salt cod, 1500 lbs. halibut.

Small boats, shore, 25,000 lbs. fresh fish.

Vessels Sailed.

Senator Saulsbury, Georges handlining. Sch. Jennie B. Hodgdon,

pollock

seining.

Sch. Ellen C. Burke, Boston. Harry A. Nickerson, dory Sch. handlining.

Sch. Gladiator, dory handlining. Sch. Hiram Lowell, dory handlining.

Sch. Yakima, halibuting. Elk, halibuting. Sch.

Sch. Jeanette, haddocking.
Sch. Mary E. Cooney, haddocking.
Sch. Annie and eJnnie, haddocking.
Sch. A. C. Newhall, haddocking.

TODAY'S FISH MARKET.

Salt Fish.

Handline Georges codfish, large, \$5; medium, \$4.50; snappers, \$3. Trawl, Georges codfish, large, \$4.75;

medium, \$4,25.

Eastern halibut codfish, large, \$4.50; medium, \$4.

Haddock, \$2. Pollock, \$2.

Cusk, large, \$2.50; medium, \$2; snappers, \$1.50. Hake, \$1.75. All codfish with napes picked bring

25c over the above prices. Fresh Fish.

Haddock, \$1.10. Large cod, \$2.25; mediums, \$1.75; snappers, 75c,

Cusk, large, \$1.60; mediums, \$1.25; snappers, 60c.

Dressed pollock, \$1.10; round, \$1. Fresh codfish not gilled bring 10c per cwt. less than the above prices.

Halibut, 12 cts, per lb. for white and 10 cts. for gray.

Pollock Seiners on the Rips.

Quite a number of the pollock seining fleet are now down to the Rips, looking for the schools which are due there. Some of the vessels have come over that ground during the early part of the week report seeing pollock schooling there. Sch. Jennie B. Hodgdon, Capt, John Keoughan, sailed yesterday on a pollock seining trip.

ONLY CALL IS FOR SHORE FISH AND THIS IN LIMITED DE-MAND.

The market at T wharf is very dull indeed today. There is something doing on shore fish, but off-shores are at a standstill all right, with no sale for the cod.

Since last report, 14 craft have arrived, four from off-shore and the and the rest market and smoke boats, five of the latter having from 500 to 2500 pounds only. There are no big fares in among the market fishermen and for the off-shores sch. Belbina P. Domingoes leads with 70,000 pounds. Some of the crafts from Georges have much smaller trips than was expected, and bear out the correctness of the report that the cod school is all broken up out there and the half

of the fishing gone by.

Most of the big off-shore vessels were fishing to the eastward, on Brown's and LaHave banks this trip out.

Boston Arrivals.

The fares and receipts in detail

Sch. Mettacomet, 5000 haddock, 3000 cod.

Sch. Belbina P. Domingoes, 50,000 haddock, 20,000 cod.

Sch. Rose Dorothea, 36,000 haddock,

27,000 cod. Sch. Ida S. Brooks, 16,000 haddock, 15,000 cod. Sch. Stranger, 3000 haddock, 1400

cod, 1200 hake. Sch. Catherine D. Enos, 3500 had-

6000 cod. Sch. Dixie, 2000 haddock, 4700 cod. Sch. Isabel, 500 haddock, 2500 cod. Sch. Ignatius Enos, 2000 cod.

Sch. Hortense, 25,000 haddock, 19,-000 cod.

Sch. Georgianna, 800 cod. Sch. Marian, 500 cod.

Sch. Laura Enos, 500 cod. Sch. Eva Avina, 500 cod. Off-shore haddock, \$1,25 to

\$2.50 per cwt.; shore haddock, \$3 to \$3.25; shore large cod, \$3 to \$4.25; shore market cod, \$3.

Market very dull; no sales of offshore cod.

May Enter Pacific Halibut Fishery.

The Canadian Northern Pacific Fisheries Company is making ar-rangements to enter the halibut industry. On the completion of the coming whale hunting season—about On the completion of the the end of September or the beginning of October—the 12 whalers of the company will be converted into halibut steamers. The conversion will not be a difficult matter. It will be only necessary to fit the whalers with dories when they will be able to fish for halibut along the Vancouver Island, Queen Charlotte banks. Cold storage plants will be installed at the different whaling stations along the British Columbian coast, and the fish, as soon as caught, will be brought to these, put into cold stor-age, and as soon as possible shipped to the different Pacific coast mar-

Trawler Ripple Steam Slightly Damaged.

The steam trawler Ripple, which came back to T wharf from the coal wharf at Everett yesterday morning, had her stem twisted as a result of a collision with the collier Everett in the narrow waterway. The stem of the Ripple struck the side of the Ev-erett. The damage to the Ripple is The stem of not serious.

A-pril 7.

Newfoundland Fish Prices.

The St. John's, N. F., Trade Review says:
"The fish prices are merely nomin-

al, for of course, there is nothing doing at this season. With regard to prices late in the spring, they will be at least as high as at present, and they may be higher. There has lately been inquiry for dry codfish from entirely new source. A local business man who lately visited the United States, has been asked by a provision man in a town in Pennsylvania to supply him with from 3000 to 4000 quintals a year to begin with, and good prices are assured. This only amounts to one cargo; but it might be noted in this connection that there are hundreds of towns in the United States where similar contracts could be made, if the matter were thoroughly looked into."

April 7.

Cold Storage Plant for Portland.

On Wednesday détails were pleted, whereby the ownership of Central wharf, Portland, passed into the control of the F. S. Willard Co. and allied interests who now control the whole of the wharf. The exact details of the sale have not been announced

According to the reports along the Portland waterfront, the purchasers secured the controlling share in the wharf property from the Central wharf corporation. Not only will they have all the sheds on the pier, it is understood that two other build-ings which are not a part of the wharf property will also pass into their con-

It was recently announced that the F, S, Willard Co. intended to erect a cold storage plant on Central wharf. It is supposed the purchase of the property is another step in this development. Workmen are already engaged on the sheds on the east side of the wharf, remodelling them in preparation for the cold storage plant. This new establishment, according to the plans that have been given out. will be one of the finest on the New England coast. It will be a cold storage plant in its every arrangement, not only for fish, but for other com-modities. During the past year, the modities. During the past year, the F. S. Willard Co. has been doing an immense fish business and so they have branched out into still further lines of the industry.

Portland Fish Notes.

Good weather or bad, fish continue to be brought into the harbor in large numbers. Wednesday, sch. Albert W. Black with 15,000 Eva and Mlidred with 12,000 and Richard Nunan with 12,000 landed fares for the F. S. Willard Co. and sch. Lochinvar had 5000 for the Commercial wharf dealers. Commercial wharf dealers.

From the present appearances the longed for schools of pollock have at last headed this way, and the fisher-men who have been hunting them so unsuccessfully the past six weeks will have a chance to make a dollar. Over 30,000 pounds of pollock were landed here Wednesday, most of them having been taken in the Sheepscot river, near Hendricks' Head light station, the waters there being said to be alive with fish.